*FreeTel* is a software product that makes the best use of your Internect connection and computer system to enable you to talk over the Internet. In some ways, it is similar to a telephone: you can dial somebody up, let *FreeTel* ring, and they answer the call and start talking. In other ways, it is different: you can address people by their real names, search through an Electronic Directory, and even send text messages.
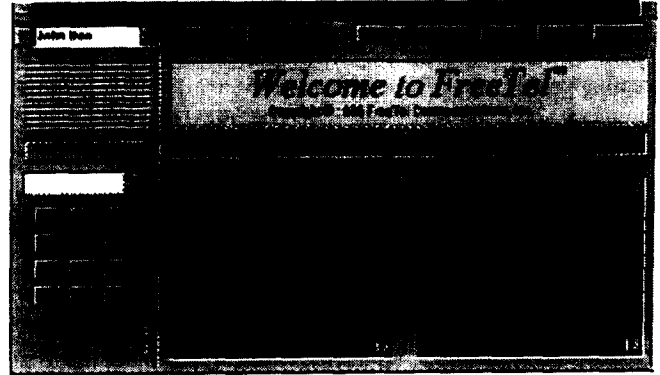
We make it easy for you to learn about this new revolution in communications by providing our product to you for free. Unlike competing Internet Telephone products, our free version is fully-functional with no time restrictions. As long as you are a non-commercial user, there is **no** need to send any money. Commercial entities are limited to a 30-day free-trial period, after which point they need to order the *FreeTel+* Registration Code for $29.95. Take a look at some of the special features that we offer:

FreeTel Special Features:

Full-Duplex Operation: With a **Sound Blaster 16** (special proprietary driver is included) or other full-duplex sound card, you can achieve full-duplex (two-way) operation. You can also use two half-duplex audio cards to achieve full-duplex.

Electronic Phone Directory: A searcheable directory of users currently on-line is automatically maintained. You can initiate a *FreeTel* phone call simply by mouse-clicking on a person's name, or by typing in the first few characters of his name. There is **no** need to connect to awkward IRC servers. There is **no** need to provide cryptic IP addresses, email addresses, or difficult-to-find POP3 or SMTP server names or passwords. The Electronic Phone Directory is seamless and automatic.

Advanced Caller ID: Not only is the calling party identified by name, but a one-line introduction message about what they want to talk to you about is also displayed. You can use this introduction message to decide whether or not you wish to answer the call.

Superior Audio Quality: With each call, *FreeTel* automatically negotiates the best possible audio quality and adjusts the compression based on the modem speeds (14,400 or 28,800) and CPU speeds of the computers involved. Pentium computers, for example, provide better audio quality than 486 machines.

Booster (tm): During peak hours, the Internet or your ISP can become overloaded or congested, resulting in lost packets and "choppy" sound quality. Our exclusive *Booster* feature alleviates this problem and improves sound quality, at the expense of increased delay. You can enable or disable the *Booster* during a conversation as conditions warrant.

File Transfer: You can transmit a file to the other party during the course of a conversation. The file transfer process will take place in the background and will not interfere with the conversation.

Multiple User Configurations: If several people in your household use *FreeTel*, each of them can have their own private configuration (including Caller ID information).

Phone Web Links: If you are using Netscape, you can also initiate a *FreeTel* phone call by clicking on a Web Link. If a business has such a link in their Web page, you can call them by clicking on their link.

Keyboard Communicator: Sometimes, it is easier to communicate something via keyboard rather than speech.

Caller Log: Keep track of who called you or who you called.

System Requirements:

The following equipment is required to use *FreeTel*:

Windows 3.1 or Windows 95 or Windows for Workgroups. (A Windows NT version will be available soon).
486/33 or faster computer. Improved sound quality will be achieved with a Pentium. At least 4 MB of RAM is recommended; more if you are using Windows 95 or running Netscape at the same time. Approximately 1 MB of hard disk space is required.
14,400 Internet connection: A dial-up PPP or SLIP Internet connection is all you need. A 28,800 connection will provide improved sound quality. *FreeTel* will even work with a Unix host account using TIA (The Internet Adapter) or SLIRP to simulate PPP or SLIP.
Windows-compatible Sound Card: Full-duplex will be achieved with Sound Blaster 16. Sound Blaster 32, or other full-duplex audio cards. Half-duplex operation will be achieved with all others. You can also obtain full-duplex by installing two half-duplex audio cards in your machine.
Microphone and Speakers or an integrated headset

What's the Catch? How can we give away a high-quality product for free?

The answer is simple. Our development and your use of *FreeTel* is supported through sponsorship. As you are using *FreeTel*, small graphical advertisements will appear on your screen. These advertisements are **non-intrusive**: Unlike TV or Radio commercials, **they will not interfere with your conversations or your use of the product in any way**. You can completely ignore them. However, if you find that one of them is of interest, you can click on the ad and visit the sponsor's home page. You can even call the sponsor if he has chosen to receive *FreeTel* calls.

We appreciate that some users would prefer not to see such advertisements. If you purchase the *FreeTel+* Registration Code for $29.95, you will have the ability to disable advertising.

For additional Information, Click on...

[Technical Support]   for help with problems in using *FreeTel*

[Order FreeTel+]   to order the *FreeTel+* Registration Code for $29.95

[User Comments]   to learn what our users are saying about *FreeTel*

[Sponsorship Program]   to learn more about *FreeTel* advertising.

[Phone Web Links]   to learn how to put phone links into your Web page.

[Company Information]   to learn more about FreeTel Communications, Inc.

[Download]   to obtain our free software.

[Cool Products]   to learn more about other useful products.

[FCC Petition]   to learn about the recent FCC petition to ban Internet Telephony technology.

[VON Coalition]   to learn about a coalition that has been formed in response to the ACTA/FCC threat.

Founded: The Internet Telephone Company (ITEL) was founded in May 1995 by Shane Mattaway and Glenn Hutton in Boca Raton, FL. NetSpeak Corporation was founded by Stephen Cohen and Robert Kennedy, and acquired ITEL in December 1995

Business: NetSpeak is a software company focused on developing and marketing full-featured Internet and network computer telephony technology for business usage. NetSpeak's WebPhone family of products is a series of easy to use network-based desktop telephones with all the features and functionality of sophisticated business phone systems. WebPhone technology is designed to drastically reduce the cost of long-distance business phone usage and to extend business communication into the realm of collaborative multimedia telecommunications.

Products: WebPhone 1.0, available now, is a Windows-based, drag-and-drop computer phone application with the look, feel, and functionality of a sophisticated business phone system. WebPhone enables real-time, full-duplex, high-quality direct phone-to-phone voice conversations over computer networks via e-mail addresses, without the use of Internet Relay Chat connectivity. Features include voicemail, four-line capability, caller ID, do not disturb, speed dial, call holding/muting, and conversation encryption. Business WebPhone System, available in the 2nd Quarter 1996, is a network-based version of a PBX-based telephone system with the addition of call routing, interoperability of third-party software applications and an integrated real-time credit processing system.

Customers: WebPhone has been downloaded by more than 40,000 users. Our Business WebPhone target applications include call center-intensive businesses such as customer service, financial services, retail sales and help desks.

Distribution: WebPhone is available over the Internet from NetSpeak (http://www.netspeak.com) as well as through bundled products and Internet Service Providers (ISPs).

Management: NetSpeak, a private corporation, funded with $4 million in equity, founded in 1995, is backed by an experienced management team which includes:

- Stephen R. Cohen, Chairman, Chief Executive Officer

- Robert Kennedy, President, Chief Operating Officer

- Shane Mattaway, Executive VP, Chief Technology Officer

- John W. Staten, Chief Financial Officer

- Harvey Kaufman, VP Product Management

- Glenn Hutton, VP of Marketing

- Robin Rednor, VP of Sales

ABOUT THE WEBPHONE

WebPhone is the professional real-time Internet telephone which lets you talk as a conventional telephone over the Internet without the cost associated with long distance calls.

WebPhone 1.0 provides the following features:

- telephone quality real-time speech
- point to point calling via e-mail or IP addressing (not IRC chat)
- full duplex operation
- 4 lines for simultaneous conversations
- call holding, muting and blocking
- last party redial
- complete caller ID
- speed dialing
- conversation encryption
- personal phone directory
- integrated real-time directory assistance
- integrated voice-mail system for sending and receiving voice mail
- party specific, user definable, custom outgoing messages
- integrated, context sensitive, interactive multimedia user manual
- user configurable sound effects
- state of the art software equipment based graphic user interface for simplified ease of use
- operates on the Internet as well as over any TCP/IP based LAN or WAN
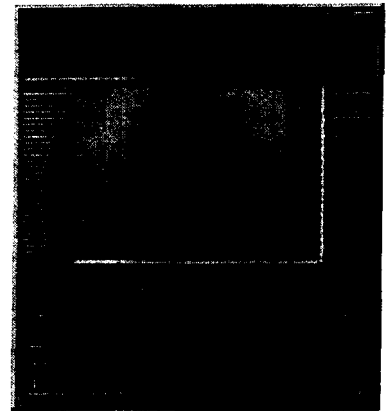- and much more...

© 1996 NetSpeak Corporation

WebPhone is a trademark of NetSpeak Corporation. All other products are trademarks or registered trademarks of their respective owners.

VDOPhone™

...A Sneak Preview...

Try VDOPhone out NOW! Full-color motion video telephony over the Internet. Download a beta copy and talk to your colleagues, friends and family. Experience the future of communication over the Internet, moving you past email and Internet phones to a new era of simultaneous two way video and audio.
VDOnet's VDOPhone lets you place a call to, or receive a call from, any other Internet user with a VDOPhone and transmit two-way COLOR video and audio, or audio only, over modem connections to Internet at speeds of 14.4kbps and up.

Frequently Asked Questions

Question	Answer
What is the VDOPhone?	Here are a few facts that will help you understand what the VDOPhone is: The VDOPhone, developed by VDOnet Corp., is video communication software for the Internet. The VDOPhone uses the TCP/IP transmission protocol. The VDOPhone enables you to place a call to, or receive a call from, any other Internet user with a VDOPhone and transmit 2 way COLOR video and audio, or audio only, over modem connections to Internet from 14.4 kbps and faster. Additional features include: Full color video at up to 15 frames per second (depending on your connection speed to Internet) Your Business Card: Use the VDOPhone to create a "business card" to identify yourself to people you call using the VDOPhone. Dial your colleagues using their email address - use the same process and database you use for email (limited to Microsoft MAPI compliant databases such as Exchange). Full duplex audio support means no more hassling with VOX settings and waiting your turn to speak (requires full duplex sound card, see related items below). Use it for talking only, you have the choice whether or not to send video to the remote party. NetAnalyzer(tm): grabs vital statistics about the quality of the current VDOPhone session.
What can I use the VDOPhone for?	Use the VDOPhone to send and receive live video and audio conversation with anyone on the Internet, anywhere in the world.
Are there additional costs for using the VDOPhone?	No matter who you call using the VDOPhone, you pay only for your Internet access call.
What is the Sneak Preview?	The current VDOPhone version is a pre-beta release available for the first time on the World Wide Web. It will be available for free downloading during a limited trial period. This software is provided for testing purposes. We welcome and encourage your feedback. Please use the bug report feature in the VDOPhone application when sending your comments and questions. The VDOPhone Sneak Preview has an expiration date built in to it to encourage users to download an updated version incorporating bug fixes and other changes. The expiration date appears in the "About" box of the VDOPhone. Reminders and advance notice of new versions will be posted on the VDOPhone web pages: watch for them!

How do I get VDOPhone technical support?	There are four ways to get help on using VDOPhone: 1. Use the online help built into the product: it covers basic operating instructions. 2. Read this FAQ - We will be updating it periodically. 3. Use the "What's New" function in the VDOPhone. This will provide you with direct access to the VDOPhone "What's New" pages of the VDO website. 4. Subscribe to the VDOPhone mail-list groups: This is the best way to give us, as well as other users, your input and to get important VDOPhone information and announcements from VDOnet. Subscribe to the lists by using the online form, while downloading VDOPhone or by sending an e-mail message with only the following text: **subscribe vdophone-discussion** in the body of the message. Leave the Subject line blank. Send the mail to: majordomo@vdolive.com. To join the announcements only list, which is a lower traffic list, send e-mail to the same majordomo address with the message: **subscribe vdophone-announcements**.
How does the VDOPhone differ from other Internet video communications software?	VDOnet's VDOPhone: Provides motion video over modem connections from 28.8kbps; will even work at 14.4 kbps! Offers full two way transmission (send and receive at the same time) of COLOR video. Enables motion video of up to 15 frames per second, depending on available bandwidth. Allows full duplex audio for natural conversation
What do I need in order to use the VDOPhone?	See Hardware and Software Requirements
What is full-duplex?	Full-duplex is the ability to send and receive audio signals at the same time. It is much like the everyday telephone. Without full-duplex (half-duplex or simplex) you have to wait until youre done listening before you can talk - very much like a CB or HAM radio

A word about full duplex versus half duplex	If your sound card support full duplex operation and your full duplex drivers are installed correctly, then your VDOPhone FDX lamp (main window, lower right) should light up during conversations. This is like talking on the telephone today, each side can speak whenever they want and be heard on the other side. You can also look in the About box, and see if the full duplex audio setup has been properly detected by the VDOPhone. If it is, you will see "Full duplex audio: Present" in the About screen. If the FDX lamp is not on, then you are in half duplex mode. This means that only one side can talk at a time due to hardware limitations on the sound card. To "turn the line around", you must wait for the other side to pause (the Listen lamp, lower left side of the main window, will turn off), and then talk. Check the Talk / Listen light occasionally to know when to talk. You will see the Mic lamp (lower right) flash when you are talking. To stop annoying background noise from turning the Mic lamp on, adjust the VOX setting which is the slider on the main window (see Online Help for exact location). VOX stands for voice activation, and means that the mic is turned off until a certain sound level is achieved. This sound level is adjusted by the VOX slider. Dragging it to the left causes the mic to be more sensitive to your voice and dragging it to the right means more sound level is required to make the mic turn on. Most speakerphones today are still half duplex and have a similar VOX mechanism, so when you are in half duplex mode, use the VDOPhone as if it was a speakerphone.
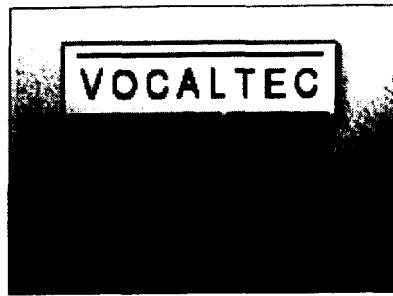
VOCALTEC INC.

THE INTERNET PHONE COMPANY

Background

VocalTec(TM), Inc., the Internet Phone Company(TM), is an international provider of audio and voice communication software for the Internet. Its products are at the forefront of real-time voice communication and audio broadcasting over the Internet and are designed to improve productivity, reduce communications costs and maximize investments in computer and network technology. VocalTec's objective is to make its software the de facto standard for real-time voice and audio communications over computer networks

From its founding in 1989, VocalTec has continued to bring to market technically innovative products. Its core products include:

> Internet Phone(TM), the first voice communications product for PC users on the Internet. With Internet Phone, users can conduct unlimited long distance and international conversations for the cost of an Internet connection. Internet Phone incorporates VocalTec-developed voice compression, voice packet reconstruction and delay handling mechanisms to enable users to enjoy real-time conversations over the Internet simply by dialing into the network and taking advantage of the multimedia capabilities built into many of today's PCs.

> Internet Wave, or I-Wave(TM), which gives organizations and individuals a way to broadcast shows, lectures, music and more in a high-quality audio format to Internet users worldwide. I-Wave has two main components: a server package that includes an encoder and works in conjunction with standard web servers, and the I-Wave Windows-compatible application that enables users to listen to I-Wave broadcasts from their Web browsers. Both are available free of charge at VocalTec's Web site

Record of Success

VocalTec's success and leadership as the Internet Phone Company is based on a track record of innovative product development in digital audio and network voice communications since 1989. Prior to Internet Phone and I-Wave, the company developed and marketed several products for local area network (LAN) communication, VocalChat, VocalChat WAN and The CAT:

> VocalChat lets companies leverage investments made in NetWare LANs by giving Windows users the ability to send and receive voice mail and conduct live "intercom"

Windows users the ability to send and receive voice mail and conduct live "intercom" conversations and audio conferences over the network.

VocalChat WAN extends VocalChat's capabilities to large corporate telephone users who aggregate voice traffic onto high-capacity T1 or switched 56 Kbps data circuits.

- The CAT (Compact Audio Technology) gives high-quality audio recording and playback capabilities to most desktop and portable PCs by connecting to the computer's printer port.

The company's hardware and software development efforts stem from one of the first text-to-speech systems that produced human-sounding speech, developed for the visually impaired under contract from the Israeli Ministry of Defense. In 1989, the company also developed the SpeechBoard 1001, one of the first digital sound boards for IBM PC compatibles.

Business Relationships

To extend its market reach, VocalTec has forged relationships with a number of key players in the networking arena, including America Online's Global Network Navigator, Boca Research Inc., Cirrus Logic Inc., Motorola Inc. and Performance Systems International.

Motorola's Information Systems Group, Transmission Products Division, the world's leading modem supplier, offers Internet Phone for distribution worldwide with Motorola's Power Class 28.8 desktop modems for business and professional users and computer-savvy power users.

Boca Research Inc. is bundling the full, unlimited-use version of Internet Phone software with its newest Sound Expression 28.8 Voice View and Digital Simultaneous Voice and Data (DSVD) products.

Under a retail affiliation with VocalTec, Ventana Communications Group is making Internet Phone software available to consumers through leading computer retail outlets in the United States and Canada.

In addition, under a joint marketing agreement between VocalTec and Cirrus Logic Inc., Cirrus is bundling Internet Phone software with audio and modem chips sold to leading PC card and systems manufacturers. Also, VocalTec and Cirrus are jointly promoting the Internet Phone technology and exploring options for voice communications over Ethernet LANs, ATM and frame relay.

Other partners include Connectware, Diamond Multimedia Systems, Inc., JABRA Corporation, US Cyber Inc., and ZOOM Telephonics, Inc.

Based in Herzliya, Israel, VocalTec's North American headquarters is located at 35 Industrial Parkway, Northvale, NJ, 07647.

VocalTec, Internet Phone, Internet Wave, I-Wave, Internet Phone Company, VocalChat and CAT are trademarks of VocalTec, Inc. Other trademarks are the property of their respective holders.

What People Are Saying About Us...

Industry leaders speaking about VocalTec and its products

A page of Internet Phone user comments

About Internet Phone

FREQUENTLY ASKED QUESTIONS

QUESTIONS ABOUT THE INTERNET PHONE SOFTWARE

Q: What is Internet Phone?

The Internet Phone software is a revolutionary product that lets Internet users talk with each other in real-time. This is not a text "chat" program: you can speak with other Internet users from all over the world with your own voice!

Q: What is required to run Internet Phone?

We recommend using at least a 486SX PC with 25MHZ and 8MB RAM. You also need Windows 3.1, and a Winsock 1.1 compatible TCP/IP Internet connection. For audio, you need a standard Windows-compatible audio board. a microphone and a speaker.

Q: Can I try the Internet Phone software?

Yes. You can try the Internet Phone software for FREE!

To receive your 60 second trial copy of the Internet Phone software, you can FTP an evaluation version of Internet Phone from ftp.vocaltec.com, with user name ftp

Q: What are the benefits of using Internet Phone?

The Internet Phone software is the easiest and least expensive way to make long-distance and global calls. Using Internet Phone doesn't incur any extra coast to your standard Internet account! With a single mouse click, you can get in touch with other Internet Phone users from all over the world. Whether you want to meet new friends. make long distance business contacts or talk to your family overseas, Internet Phone is for you.

Q: How much bandwidth does Internet Phone consume on the Internet?

The Internet Phone software uses a unique voice compression algorithm to minimize bandwidth consumption. Bandwidth usage is about 7.7Kbit of raw audio data. By adding our VC Card voice compression card, you can reduce bandwidth consumption to about 6.72Kbit of raw audio data.

Q: Can I use Internet Phone to speak to more than one user at a time?

You can only speak with one person at any one time.

Q: Can I make my own private conversations without disturbance from other users?

Internet Phone provides you with "private topics" that only you and your family, friends or business associates can use. These topics are "unlisted", and can be accessed only by the users that know about them. In this way you can conduct your conversations quietly. without getting calls from all the other on-line users. When you only use private topics, your name does not appear on the global list of on-line users. Only users that know where to look can reach you

Q: Are my calls safe?

Internet Phone sends and receives audio *directly* from the other user, without going through the Internet Phone server (the server is only used to let users locate each other). This means that your Internet Phone calls are very hard to trace.

Q: Can I work simultaneously with Internet Phone and other applications?

Sure. Internet Phone was designed for multitasking: a special dynamic icon and hot keys let you use Internet Phone even when its window is minimized. You only notice its there when someone calls or when you need it.

Q: Can I run Internet Phone over a LAN connected to the Internet?

Yes. Consult your network administrator before installing Internet Phone.

Q: How can I find other users that run Internet Phone?

The Internet Phone software connects to the IRC (Internet Relay Chat) network, thus providing you with a list of on-line users and topics of conversation. It's just like a phonebook. Simply select a user from the list and call him or her. You can also create new topics and wait for others to contact you.

QUESTIONS ABOUT THE INTERNET

Q: What type of Internet connection is required to use Internet Phone?

You need a TCP\IP Internet connection. The minimum connection is a modem SLIP\PPP connection of 14,400 baud.

Q: How can I connect my PC to the Internet?

The easiest way to find out more about connecting to the Internet is by contacting your local Internet Service Provider.

Q: What is Winsock?

Winsock is the standard Windows TCP/IP programming interface. It comes in the form of a DLL file called WINSOCK.DLL which is provided with most TCP/IP software packages.

Q: Which Winsock drivers were tested with Internet Phone?

The Internet Phone software worked successfully on Microsoft's TCP/IP, on NetManage's Chameleon and the Trumpet Winsock driver.

About Internet Phone

WHAT IS INTERNET PHONE?

Internet Phone(TM), the first voice communications product for PC users on the Internet. With Internet Phone, users can conduct unlimited long distance and international conversations for the cost of an Internet connection. Internet Phone incorporates VocalTec-developed voice compression, voice packet reconstruction and delay handling mechanisms to enable users to enjoy real-time conversations over the Internet simply by dialing into the network and taking advantage of the multimedia capabilities built into many of today's PCs.
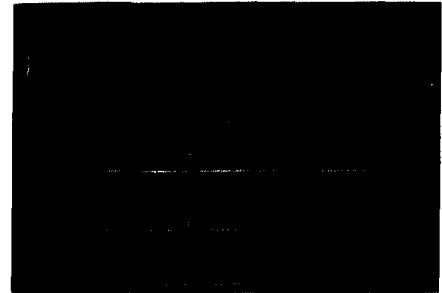
All you need is Internet Phone, a TCP\IP Internet connection and a Windows-compatible audio device. Plug in a microphone and speaker, run Internet Phone, and, by clicking a button, get in touch with Internet users all over the world. Whether you want to meet new friends, speak with your family, or make the direct business contact, Internet Phone is for you.
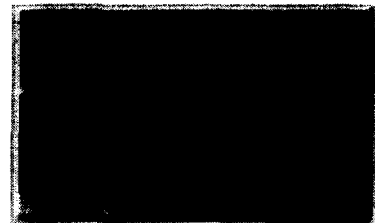
A friendly graphic user interface and a smart Voice-Activation feature make conversation a snap. VocalTec's sophisticated voice compression and voice transfer technology makes sure your voice gets across in a flash, using only a fraction of the available bandwidth. Internet Phone now also supports Full Duplex audio: it lets you speak and listen at the same time, making conversation as easy and natural as possible.

You can even set up your own "private topics" that only you and your family, friends or business associates know about, letting you conduct private conversations without disturbance from unwanted users.

Internet Phone always presents you with an updated list of topics and on-line users for you to choose. You can even set up Quick-Dial buttons which give you immediate access to frequently called users. Once you establish contact with a user, communication is carried out directly over the Internet.
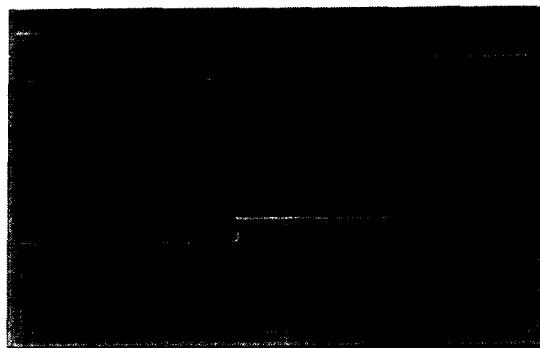
Internet Phone and Internet Wave, our new Audio On Demand player for web browsers, will change your experience of the Internet. It will suddenly become an interactive world full of live and exciting sound for you to enjoy.

Internet PHONE
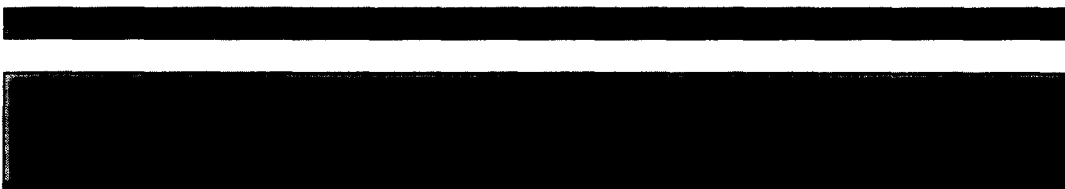
VOCALTEC

VOCAL TEC

35 Industrial Parkway, Northvale, NJ 07647

Company Background

Voxware, Inc., develops and markets proprietary digital speech processing products that enable innovative and creative use of voice in computing, Internet and communications applications. Founded in 1993, Voxware is privately held and located in Skillman. N.J. Its products include **ToolVox for Multimedia, ToolVox for the Web**, and **ToolVox RT**. Each is designed to meet the growing need for new technologies that support and extend voice applications for business. communications. education and entertainment.

Voxware's first commercial product, ToolVox for Multimedia, was introduced in July 1995. Compared to existing technologies, ToolVox for Multimedia enables users to store substantially more digital voice information, process it faster, and reproduce voice with higher accuracy on common 486-level PC and Mac platforms, without requiring use of specialized DSP hardware for recording or playback. It also permits developers to create unique voice effects through pitch-shifting, speed-up/slow-down of playback, and voice transformation, including VoiceFonts. All of these capabilities are made possible through Voxware's proprietary MetaVoice technology.

Voxware expanded its product line in December 1995 with the introductions of ToolVox for the Web and ToolVox RT. These products extend the core technologies of ToolVox for Multimedia to the Internet and real-time interactive voice communications.

ToolVox for the Web makes it simple to add high-quality voice content to Web home pages and hypertext markup language (HTML) documents, and for users to listen to it. ToolVox RT is a revolutionary codec (**compressor/dec**ompressor) for real-time speech communications and effects that enables virtually any communications. business, consumer or game developer to enhance their products with high-quality voice.

Voxware is building strategic partnerships with leaders in the multimedia software, entertainment and communications industries in order to license its technology for use on an OEM basis, and to support joint development of new multimedia products for the business, consumer and education markets.

In the consumer market, Microsoft Corp. has licensed key components of ToolVox for Multimedia for use in the best-selling Microsoft® Bookshelf® CD-ROM Reference Library. ToolVox for Multimedia's compression capabilities will enable more high-quality voice audio to be included in Bookshelf. It also will enable Microsoft to add more content of all types to the product, which will enhance the overall richness of Bookshelf. Other key licensees and users of ToolVox technology include Access Technologies, Accolade, Broderbund, Gametek. Heinle & Heinle and Midisoft.
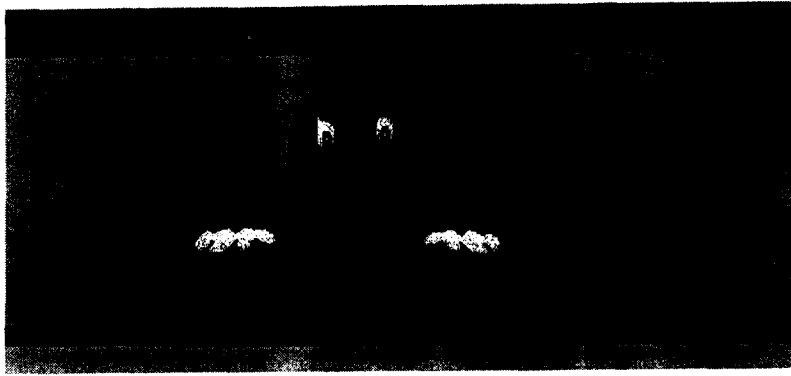
In the education sector, the Corporation for Research and Educational Networking (CREN) has selected ToolVox technology for delivery of high-quality real-time voice across the Internet, while minimizing bandwidth requirements and costs for its member institutions. CREN is an international, non-profit organization committed to serving the networking needs of higher education. Its membership includes many of the world's most prestigious academic institutions, including Cornell University, Harvard University, Massachusetts Institute of Technology. Princeton University and Stanford University.

Voxware's management team is headed by President and CEO Michael Goldstein. He has been involved in the telecommunications, software and media industries for 15 years in both management and consulting capacities. J. Gerard Aguilar, vice president of research, has been independently developing the company's core technologies and software since 1991

Steven J. Ott, vice president of sales and marketing, was previously vice president of Legent Corporation. Kenneth H. Traub, senior vice president chief financial officer, was previously vice president of Trans-Resources and president of Conservation Securities Corporation. Vice President of Development Ken Whittington was previously director of development-desktop products for Symantec Corporation.

The company's advisory board includes Vladimir Cuperman, professor of electrical engineering at Simon Fraser University in Vancouver, B.C., and a leading expert in communications systems and digital signal processing with emphasis on speech coding, speech recognition, image coding and digital communications; Francis X. Dzubeck, president and chief executive officer of Communications Network Architects, Inc., a Washington, D.C.-based international consulting firm specializing in the strategic planning, design, implementation and management of local, campus and wide area networks; Allen Gersho, a world-renowned expert in speech-coding technology and a professor of electrical and computer engineering at the University of California, Santa Barbara; Martin Mazner, president, chief executive officer and co-founder of BookMaker Corporation, developers of ClickBook, a leading software utility product for the desktop publishing market; and Stuart Patterson, managing director of Vicorp Interactive Systems, Inc., a leading software developer for large-scale voice processing and information gateway services.

Voxware, **ToolVox**, **VoiceFont** and **MetaVoice** are trademarks of Voxware, Inc.
Microsoft and **Bookshelf** are registered trademarks of Microsoft Corporation.

Table of Contents

White Pine Software Provides a Host of Desktop Connectivity

"We simplify your connectivity."
"We integrate your desktop to your host."
"We reduce your cost, enhancing hardware value with software."

White Pine Software serves corporations, government agencies, educational institutions, SOHO, and remote-users worldwide through desktop computer-based information access and communications software. Our cross-platform offering includes desktop videoconferencing, desktop-to-host connectivity, network access, and file transfer.

For over a decade, White Pine has been developing software that integrates with today's technological advancements - most recently, the explosive Internet market. We strive to develop multiplatform desktop connectivity solutions that install easily and without needing to change existing hardware. Our commitment to global solutions that enhance productivity remains at the forefront of our efforts.

Whether people need to access information found on host computers or communicate and exchange information with others around the globe, customers know they can rely on White Pine for a seamless solution.

A brief description on our major product lines follows. For more in depth information see Product Information and Demos.

(Return to Table of Contents)

Enhanced CU-SeeMe

Desktop videoconferencing software for real time person-to-person or group conferencing and collaboration is easy with White Pine's Enhanced CU-SeeMe. When coupled with the White Pine Reflector, Enhanced CU-SeeMe provides a level of group collaboration not found in any other videoconferencing product.

You can use Enhanced CU-SeeMe over the Internet, any TCP/IP network or your home telephone line giving you the power to communicate globally without expensive hardware. Enhanced CU-SeeMe achieves low bandwidth connections through data compression techniques that enable you to operate effectively over a 28.8k modem (14.4k audio only), ISDN link or better. The software offers full-color video, audio, chat window, and whiteboard communications, and you can participate in `Live Over the

video, audio, chat window, and whiteboard communications, and you can participate in 'Live Over the Internet' conferences and broadcasts.

General Features

- Multiplatform - Windows 95, Windows NT, Windows 3.1, Macintosh and Power Macintosh
- Participants - view up to 8, unlimited for audio and talk window
- WhitePineBoard - document and image group collaboration
- Mosaic Browser Support - launch CU-SeeMe directly from a Web page
- Color - 8 to 24-bit true color; 4 to 8-bit greyscale
- Security - password, caller ID

(Return to Table of Contents)

The White Pine Reflector

For group conferencing and collaboration, the White Pine Relector server enables you to conduct and manage meetings over the Internet, your TCP/IP network or MBone. The Reflector enables multiple Enhanced CU-SeeMe users to hold group discussions, collaborate over documents using the whiteboard, and cybercast to large audiences (broadcast) simultaneously.

Numerous controls and adjustments for bandwidth, security, and more make managing the Reflector easy. It is a powerful and cost effective tool that will dramatically improve your worldwide communications.

General Features

- Multiplatform - Windows 95, NT, 3.5.1 and higher; 9 UNIX platforms
- Conference Management - configure, conference, and control access
- Administration - configuration files for setting up systems and networks
- Broadcasts over the Internet, TCP/IP network or MBone
- Security - passwords, unique IDs for each conference

(Return to Table of Contents)

eXodus

White Pine's eXodus software provides Macintosh and Windows PC users with the power to seamlessly access a wealth of X Window software applications residing on workgroup and enterprise host computers. By combining the benefits of high-powered multi-user computers with the user friendliness and local processing capabilities of your desktop computer, eXodus clearly delivers the best of both worlds.

eXodus for Macintosh supports all Macintosh, Power Macintosh, and MacOS-compatibles. It adheres to the X11R6 standard so you can be assured true interoperability. It is Open Transport native and Power Macintosh ready which guarantees that eXodus will perform reliably on the latest Macintosh releases. It supports MacTCP, DECnet and high-speed serial connections.

General Features

- Adheres to industry standards
- Open Transport "Native", accelerated for Power Macintosh
- Secure and easy FTP file transfers
- Wide range of configuration options
- Expanded range of remote connectivity options
- Complete Common Desktop Environment, (CDE) support

Complete Common Desktop Environment, (CDE) support

eXodus for Windows enables personal computer users to access mission-critical X host applications. It supports Windows 3.1, Workgroups, Windows 95, and NT. It includes both 16- and 32-bit X server implementations, and provides a friendly, simple, and intuitive Win95-style interface. An unsurpassed combination of price, performance, and ease-of-use makes eXodus the preeminent X connectivity product for your Windows desktop.

General Features

> Adheres to industry standards
> 32-bit architecture for Windows 95 and Windows NT support
> Includes TCP/IP stack
> High speed serial support for serial and modem connections
> Bundled with PC320, a high performance DEC VT320 terminal emulator

(Return to Table of Contents)

5PM Term /5PM Pro

Call White Pine for simple, state-of-the-art terminal emulation solutions that connect Windows PC and Macintosh desktop computer users to the critical information found on IBM Mainframes, AS/400, UNIX, VAX or HP hosts. A full line of ReGIS and Tektronix emulators are also available. Feature rich and simple to use, White Pine offers customers true flexibility.

5PM Term: automate every day tasks and customize your desktop using 5PM Term's power user defined macros, hot spots, toolbars, graphical keyboard remapping, and WatchMe automatic script recording. We also offer FTP client and server and network serial connections. Whether your customer needs 3270 or 5250, 5PM Term is the best solution

Purchase 5PM Term for specific individual environments or as a complete multiplatform module set available as 5PM Office.

General Features

> Multiple, simultaneous sessions to different hosts
> WatchMe macro script recorder
> Customization through hot keys, hot spots, keyboard macros
> 3270 extended data stream support
> Full drag & drop keyboard remapping
> Seven methods of file transfer supported
> SLIP and PPP serial connections

5PM Pro: further enhance 5PM Term with 5PM Pro -- a powerful graphical user interface builder, terminal emulation front ending tool, and distributed application developer. 5PM Pro delivers data to people faster for further manipulation in word processing and spreadsheet applications.

General Features

> Create cross-platform projects to be used with 5PM Term (Mac & Windows)
> Object Oriented Scripting Language
> Front-ending tools
> Built-in script debugger with step, trace and display of variables
> Support for inter-application communications
> Includes all 5PM Term features (multisessions, multihosts, hotspots, hotkeys etc.)

XingSound

Data Sheet

Features:

MPEG Audio Compression
> Software only file to file MPEG compression of .WAV files
> Real-time capture and compression using DSP audio cards

MPEG Audio Editor
> Cut, Paste, Trim and Splice MPEG audio files

MPEG Audio Player
> Software only playback on any sound-equipped PC
> Hardware assisted playback on DSP audio cards
> Multimedia support via an MCI driver and OLE server

Description:

XingSound is the first Windows application to provide real-time audio capture and compression utilizing the high-quality international MPEG standard for audio compression.

XingSound uses ISO standard MPEG compression to reduce one minute of CD quality audio to less than one megabyte in size; by contrast .WAV files typically require ten megabytes per minute.

XingSound is a powerful application that brings CD quality sound to the desktop with full multimedia capability and manageable file sizes.

Specifications:

MPEG Audio Encoder
> **Audio Inputs**
> Real-time capture and compression from microphone or analog line in using Analog Devices 2115 DSP based sound cards
> File compression from .WAV files (11kHz, 22kHz, 44kHz - 8bit, 16bit - stereo, mono)
> **Definable Format Settings**
> Gain Adjustment: compensate for relative amplitude of input
> Sample Rates: 32kHz, 44.1kHz (CD), and 48kHz (DAT)
> Data Rates: 32, 48, 56, 64, 80, 96, 112, 160, 192 kbits/second/channel
> Channels: Mono, Stereo, Dual Channel, Joint Stereo (4, 8, 12, 16 band)
> Compression Ratios: 8:1 (CD quality), 14:1 (FM quality), customer

Audio Player
> **Supported Playback Formats**
> MPEG Audio Files
> * Layers: I and II
> * Bit rates: all
> * Modes: mono, stereo, dual channel, joint stereo
> WAVE Audio files

Audio Output
High performance software decoder
* Sample Frequency: 11kHz, 22kHz
* Resolution: 8 or 16bit output
* Channels: Stereo or Mono output
Full Precision DSP decoder (requires ADSP 2115)
* Sample Frequency: 11kHz, 22kHz, 44kHz
* Resolution: 16bit output
* Channels: Stereo or Mono output

MPEG Editor
Combine multiple MPEG audio files
Delete or insert marked section of MPEG audio files

MPEG Compliance
Full compliance with MPEG-1 (ISO 11172) Layer I and Layer II standards

System Requirements
386/486 CPU, 8MB RAM, Microsoft Windows 3.1 or higher, 256 or High-Color display driver recommended.
Analog Devices 2115 DSP required for real-time capture and hardware assisted playback

Exhibit B

Free World Dial-Up Project

Free World Dialup - ("FWD") - (http://www.pulver.com/fwd) - In October 1995, on the Internet Phone mailing list there was a thread on Enterprise Computing. What was of particular interest to many people on the mail list was the "patching" of a POTS (plain old telephone service) line into an IPhone session. There was a heated discussion regarding the merits of achieving this - and to the astonishment of everybody on the list at the time - one person, Izak Jenie of Jakarta, Indonesia not only stated that it was doable, but that he had a working prototype.

A couple of days later, the Free World Dialup experiment was started.

There was a lot of excitement surrounding Free World Dialup when it was first announced. We received literally hundreds of e-mails from people who wished to participate in the experiment - mostly from people who had family members overseas and were hoping to find out that there was a commitment for a local server in the town of their family member. In fact, I still receive similar requests today. The International media also found the project fascinating and there was a lot of coverage specially within the United Kingdom.

During the first couple of days of the FWD project - there were many e-mails and follow up discussions between the three of us - Izak in Indonesia, Brandon Lucas in Tokyo and myself in New York.

It was during the startup phase that we agreed on the FAQ which is still a vailable on the net today - as well as our mission. One of the initial challenges was to form a team and delegate the responsibilities accordingly.

Within the first week of the experiment, the core project team was assembled, and the people who contributed to this effort included: Izak Jenie (Jakarta, Indonesia) - Development, Brandon Lucas (Tokyo, Japan) - Global Server Coordinator, Alex Balfour (London, England) - Media Relations, Lynda Meyer (NYC, USA) - Legal Coordinator, Leonard Czajka (Seattle, WA USA) - Webmaster, Sandy Combs (Burlington, VT USA) - Global Media Coordinator, and myself, Project Manager.

Above all else - the FWD Project was an experiment - and was to only allow non-commercial users to use the software developed for the specific reason of being able to contact friends and family members from overseas, in the spirit of amateur radio. FWD also was a social experiment - a test to see if people who have never met, from places all around the world could get together as a team and work toward a common goal in 1996.

We also acknowledged from the start that FWD was not scaleable a scaleable technology. At the present time there needs to be a dedicated PC for each phone line which was going to be made available. A timetable was agreed to at the commencement of the project. We put a floating end date of April, 1996 so that the people agreeing to run FWD Servers didn't need to make a long term commitment to the project. The project was recently extended to run until June 30, 1996.

The FWD Client/Server software is a winsock application. All that it does is provide a means for a telephone number to be remotely dialed over the Internet. FWD works well with all of the winsock based VON products. Many of the FWD Servers have chosen to use IPhone simply because IPhone has a feature called "autoconnect." Except for FreeTel (http://www.freetel.com) this is a feature which was missing from the VON products during the initial testing of beta 1 of FWD.

While the software was under development some of the International media found out about the project and started making significant noise. Before long the project team read about the project in the Sunday Times of London that British Telecom was launching an investigation regarding Free World Dialup. Without trying, we started to rattle the cages of some of the global telcoms.

Our mission wasn't to upset anybody - but just to allow extended family members to keep in touch with each other. There were plenty of skeptics. Well, while others were arguing the virtues of what was doable, Izak was hard at work, making all of this happen.

After the first FWD Server in Seattle went on-line, we started seeing servers from all over the world come on-line as well. During February/March '96 there have been servers on-line from: Melbourne, Australia, Jakarta Indonesia, Singapore, Moscow, Russia, Guam, Stockholm Sweden, Canada: Vancouver, Calgary, Toronto, and the following 10 States in the US: AZ, CA, CT, KS, OH, MD, NJ,NY, VA, WA. Overall there has been a commitment from over 60 locations to establish a FWD Server and I fully expect many (if not most) of these sites to be active during 1996.

What's required to run a FWD Server? A multimedia PC which has Internet Connectivity - either via Ethernet or SLIP/PPP as well as a Cirrus Logic compatible voice/fax modem. The speaker output of the soundcard gets attached using an "Attenuator Cable" to the mic input of the voice/fax modem - and the speaker output of the voice/fax modem gets attached using a second "Attenuator Cable" to the mic input of the soundcard. Levels are adjusted using the VON software project - Internet Phone being the most popular VON product used with the experiment.

Along the way we all learned may sublities which wasn't obvious to us from the start - regarding the overall design of the software - together with the need to build in certain features - to stop certain individuals from either compromising the FWD Server with regard to the locations it can dial - to the hours of operation which a particular volunteer permits.

What we ended up creating a community. Mostly people whose interest was to help extend the virtual community. By in large the project was a success. We were able prove that in 1996 people from all over the world, who have mostly never met could work together and give so much of their time to help each other.

Free World Dialup FAQ

1. What is the Free World Dialup?

2. How did this project get started?

3. What are all the parts of this system?

4. What platform(s) will this system run on?

5. What is the timeframe of this project?

6. How is this experiment organized?

7. Who is coordinating the experiment?

8. What kind of participation do we need for the project?

9. Where do I get a voice modem?

10. How have phone companies reacted to this?

11. Is it illegal?

12. Won't the telecoms stop the Internet because of this project?

1. What is the Free World Dialup?

Free World Dialup is a grass-roots global experiment to enable Internet users to make telephone calls not just to others on the Internet, but to any telephone number in local calling areas across the globe.

Using popular Internet telephony software like Internet Phone or Digiphone, users contact a remote server in the destination city of their call. This server "patches" the Internet phone call to any phone number in the local exchange. The system is regulated by a client-server structure and software that our group is developing in several geographical areas of the world.

As an example of what we envision, a user in Hong Kong may be able to use an Internet-based server in Paris to effectively dial any phone number and talk with anyone in the Paris area for free. No longer would free phone calls limited to the technical elite!

This service will be offered to the public for free ($0 cost), for exclusive non-commercial